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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/725,259

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Leo W. Spychalla

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05/16/2006

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EXAMINER

PAPE, ZACHARY

ART UNIT

PAPER NUMBER

2835

DATE MAILED: 05/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/725,259

Applicant(s)

SPYCHALLA, LEO W.

Examiner

Zachary M. Pape

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 and 21-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 and 21-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The following detailed action is in response to the correspondence filed 3/14/2006.

The indicated allowability of claims 9, and 13-16 is withdrawn in view of the newly discovered reference(s) to Grois et al. and Astier. Rejections based on the newly cited reference(s) follow.

Drawings

1. The drawings are objected to under 37 CFR 1.83(a) because they fail to show that, "the attachment pillar, the alignment post, and the alignment rib have different geometries" as described in claim 16. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an

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application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claim 16 is objected to for the following reason(s):

Claim 16 recites, "the attachment pillar, the alignment post, and the alignment rib have a different geometry" however as illustrated in Fig 2 of the present invention, it appears as if the alignment post (44) and alignment pillar (50) have the same geometry (I.E. each is circular in nature). For the purposes of examination, and given the details in the drawings, the Examiner has interpreted the post, and the pillar to have the same geometry's and the rib to have a separate, distinct geometry.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-7, 13, 14, 18, 21, and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Astier (US 5,788,211).

With respect to claim 1, Astier teaches a data storage cartridge comprising: a housing (15) defining an interior cavity (As illustrated in Fig 3), an access window (Defined by 16, 17 and 18), and at least one alignment feature (23) positioned within the interior cavity, wherein the housing includes a polymeric material (Column 2, Lines 64-65); and a hard drive (10) maintained within the interior cavity (As illustrated in Fig 6), the hard drive having at least one electrical connection point (Best illustrated as element 10 in Fig 8) wherein the at least one alignment feature is configured to interact with the hard drive to at least partially align the at least one electrical connection point relative to the access window (As illustrated in Fig 6).

With respect to claim 2, Astier further teaches that the hard drive includes at least one alignment feature to mate with the at least one alignment feature of the housing to at least partially align the at least one electrical connection relative to the access window (Column 3, Lines 11-17).

With respect to claim 3, Astier further teaches that the housing defines a Y-direction parallel to a length of the access window, and a X-direction perpendicular to a width of the access window, the at least one alignment feature (23) of the housing configured to align the at least one electrical connection point relative to the access window in at least one of the X-direction and the Y-direction (As illustrated in Fig 6).

With respect to claim 4, Astier further teaches that the at least one alignment feature (23) of the housing includes an alignment post (As illustrated in Fig 4) configured to align the at least one electrical connection point relative to the access window in the X-direction (As illustrated in Fig 6).

With respect to claim 5, Astier further teaches that the alignment post defines a first tier having a first diameter and extending from a first major member of the housing and a second tier having a second diameter and extending from the first tier opposite the first major member of the housing, the first diameter being greater than the second diameter (As illustrated in Fig 4).

With respect to claim 6, Astier further teaches that the at least one alignment feature (23) of the housing further includes a second alignment post (23) configured to align the at least one electrical connection point relative to the access window in the X-direction (As illustrated in Figs 4 and 6).

With respect to claim 7, Astier further teaches that the hard drive (10) includes a mounting cavity configured to receive the alignment post (Column 3, Lines 14-17).

With respect to claim 13, Astier further teaches a data storage cartridge comprising: a housing (15) including a polymeric material (Column 2 Lines 64-65) and a first major member (16) that forms an access window (Defined by 16-18 as illustrated in Fig 3), the housing defining an interior cavity (As illustrated in Fig 3) and at least one alignment feature (23) positioned within the interior cavity; and a hard drive (10) maintained within the interior cavity (As illustrated in Fig 6), the hard drive having at least one electrical connection point (Best illustrated as element 10 in Fig 8); wherein the at least one alignment feature of the housing is configured to interact with the hard drive to align the at least one electrical connection point relative to the access window in a Z-direction that is perpendicular to the first major member (As illustrated in Fig 6).

With respect to claim 14, Astier further teaches that the at least one alignment feature (23) of the housing includes an attachment pillar (23 as illustrated in Fig 4) configured to align the at least one electrical connection point relative to the access window in the Z-direction (As illustrated in Fig 8).

With respect to method claim 18, the method steps recited in the claims are inherently necessitated by the device structure as taught by the Astier reference.

With respect to claim 21, Astier further teaches that the housing (15) includes a first planar member (16) defining the access window, and the at least one alignment feature (23) extends from the planar member to interact with the hard drive (10) to position the at least one electrical connection point (Best illustrated as element 10 in Fig 8) to be contacted through the access window (As illustrated in Fig 6).

With respect to claim 24, Astier further teaches that the step of aligning the at least one electrical connection point includes placing the at least one electrical connection point in a position to be transversely contacted by a cartridge drive through the access window (As illustrated in Fig 6).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 8-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Astier in view of Grois et al. (US 6,331,079).

With respect to claim 8, Astier teaches the limitations of claim 3 above but fails to teach that at least one alignment feature of the housing includes an alignment rib defining a substantially planar surface extending in a direction substantially perpendicular to the access window, the alignment rib being configured to align the at least one electrical connection point relative to the access window in the Y-direction. Grois et al. teaches the conventionality of using an alignment rib (48) defining a substantially planar surface (As illustrated in Fig 2) extending in a direction substantially perpendicular to an access window (30 See also Column 3, Lines 41-44). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Grois et al. with that of Astier to provide a further means of aligning the disk drive (10) with the housing (15) in the Y-direction.

With respect to claim 9, Astier teaches a data storage cartridge comprising: a housing (15) defining an interior cavity (As illustrated in Fig 3), an access window (Defined at least in part by 17-19), at least one alignment feature (23) positioned within the interior of the cavity (As illustrated in Fig 3), and a Y-direction parallel to a length of the access window, the housing including a polymeric material, a hard drive (10) maintained within the interior cavity (Fig 3) the hard drive having at least one electrical connection point (Best described by element 10 in Fig 8). Astier fails to teach at least one alignment features includes an alignment rib defining a substantially planar surface extending in a direction substantially perpendicular to the access window wherein the

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hard drive includes an alignment slot configured to receive the alignment rib, the alignment rib being configured to align the at least one electrical connection point relative to the access window in the Y-direction. Grois et al. teaches the conventionality of utilizing a substantially planar alignment rib (48) with a complimentary alignment groove (88b) to align two devices. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Grois et al. with that of Astier to provide a further means of aligning the disk drive (10) with the housing (15) in the Y-direction.

With respect to claim 10, Grois et al. further teaches that the alignment rib (48) is adjacent the access window (30).

With respect to claim 11, Astier further teaches an alignment post (23) configured to align the at least one electrical connection point relative to the access window in the X-direction (As illustrated in Fig 6).

Claims 12 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Astier.

With respect to claim 12, Astier teaches the limitations of claim 1 above, but is silent as to the alignment tolerance range, however It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize a tolerance range of +/-0.005 inches, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). The use of such a value would allow the hard disc to

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continue to operate without causing disconnection problems while sufficiently maintaining the device within the housing and could be determined by routine experimentation by one of ordinary skill in the art.

With respect to claim 17, Astier teaches the limitations of claim 1 above, but is silent as to a specific length and width of the housing. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the length and width of the housing so that the housing will accommodate the disk drive.

Claim 15 is rejected 35 U.S.C. 103(a) as being unpatentable over Astier in view of Crockett (US 6,061,231).

With respect to claim 15, Astier teaches the limitations of claim 14 above, but fails to teach that the attachment pillar defines a passage axially extending through the attachment pillar, and the data the data storage cartridge further comprises: an attachment device inserted through the passage and into the housing to facilitate alignment of the at least one electrical connection point relative to the access window in the Z-direction. Crockett teaches a pillar (20) with a passage axially extending therethrough (Column 3, Lines 22-23), an attachment device inserted through the passage and into a housing to facilitate alignment of a circuit board in a Z-direction (Column 3, Lines 22-40). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Crockett with that of Astier to provide a rugged device which is easy to assemble (Crockett, Column 1, Lines 34-40).

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Astier in view of Crockett, and further in view of Grois et al.

With respect to claim 16, as best can be understood by the examiner, Astier in view of Crockett teaches the limitations of claim 15 above and Astier further teaches that the at least one alignment feature (23) further includes at least one alignment post (As illustrated in Fig 3) to align the at least one electrical connection point relative to the access window in the X-direction, but fails to teach an alignment rib configured to align the at least one electrical connection point relative to the access window in the Y-direction. Grois et al. teaches the conventionality of using an alignment rib (48) to align at least one electrical connection point relative to an access window (30). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Grois et al. with that of Astier to provide a further means of aligning the disk drive (10) with the housing (15) in the Y-direction. Additionally, the alignment post and pillar of Astier and Crockett have similar geometries, but contrasting geometries with the planar alignment rib of Grois et al.

Claims 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Astier in view of Lu et al. (US 6,317,317).

With respect to claim 22, Astier further teaches that the housing includes a base (16) defining the access window and the at least one alignment feature (See Fig 3), but fails to teach that the housing includes a cover. Lu et al. teaches the conventionality of

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covering a hard disk drive housing (Via 10). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Lu et al. with that of Astier to provide additional protection to the hard disk drive of Astier and to prevent, at least in part, some electromagnetic waves from interfering with the hard disk (Column 1, Lines 46-50).

With respect to claim 23, Astier further teaches that the base (16) is formed of a single piece (Column 2, Lines 63-65), and Lu et al. teaches that the cover (10) is formed of a single piece (As illustrated in Fig 1).

Response to Arguments

5. Applicant's arguments with respect to claims 1- 18, 21-24 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zachary M. Pape whose telephone number is 571-272-2201. The examiner can normally be reached on Mon. - Thur. & every other Fri. (8:00am - 5:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn Feild can be reached at 571-272-2092. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ZMP


LISA LEA-EDMONDS
PRIMARY EXAMINER